

**U.S. DEPARTMENT OF LABOR  
WORKPLACE STANDARDS ADMINISTRATION  
BUREAU OF LABOR STANDARDS  
MATERIAL SAFETY DATA SHEET**

FORM NO. OSHA-20 (MODIFIED)  
MAY 1974

MDC CONTROL NO. **QPL 1956**

**SECTION I: MATERIAL AND MANUFACTURER IDENTIFICATION**

MANUFACTURER'S NAME <b>CPR Division, The Upjohn Company</b>		EMERGENCY TELEPHONE NO. <b>(213) 320-3550</b>
ADDRESS (NUMBER, STREET, CITY, STATE AND ZIP CODE) <b>555 Alaska Avenue, Torrance, California 90503</b>		
CHEMICAL NAME AND SYNONYMS <b>N-Ethyl Morpholine</b>	TRADE NAME AND SYNONYMS (QPL 1956 Type 2 & 3) <b>Isonate® CPR 2014 Component C</b>	
CHEMICAL FAMILY <b>Tertiary amine</b>	FORMULA <b>C<sub>6</sub>H<sub>13</sub>NO</b>	

**SECTION II: HAZARDOUS INGREDIENTS\***

PAINTS, PRESERVATIVES/SOLVENTS	%	TLV (UNITS)	ALLOYS AND METALLIC COATINGS	%	TLV (UNITS)
PIGMENTS			BASE METAL		
CATALYST <b>N-Ethyl Morpholine</b>	<b>100</b>	<b>20</b>	ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES*				%	TLV (UNITS)

**SECTION III: PHYSICAL DATA**

BOILING POINT (°F)	<b>281</b>	SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	<b>0.91</b>
VAPOR PRESSURE (mm Hg.)	<b>5</b>	PERCENT VOLATILE BY VOLUME (%)	<b>100</b>
VAPOR DENSITY (AIR = 1)	<b>4</b>	EVAPORATION RATE (Butyl Acetate = 1)	<b>0.65</b>
SOLUBILITY IN WATER	<b>100%</b>		

APPEARANCE AND ODOR **Colorless liquid. Ammoniacal odor**

**SECTION IV: FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT (METHOD USED) <b>96°F. Tag open cup</b>	FLAMMABLE LIMITS	Lel <b>1.0</b>	Uel <b>9.8</b>
EXTINGUISHING MEDIA <b>Water, foam, CO<sub>2</sub>, dry chemical</b>			

**SPECIAL FIRE FIGHTING PROCEDURES**

**Application of water will reduce burning rate. Vapors irritating to eyes, nose and throat.**

**Firefighters should wear self-contained breathing apparatus.**

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

**Thermal decomposition may produce nitrogen oxides and traces of HCN.**

\*PLEASE DO NOT USE GENERALIZATIONS, SUCH AS PETROLEUM HYDROCARBONS, ALCOHOL, KETONES.  
USE SPECIFIC CHEMICAL NAMES, SUCH AS METHANOL, BENZENE, PERCHLOROETHYLENE.

## SECTION V: HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

20 ppm.

## EFFECTS OF OVEREXPOSURE

Vapors irritate nose and throat and may cause nausea. Liquid is severe eye irritant.

Vapors may cause asymptotic transient fogging of cornea of the eye ("halo" vision).

## EMERGENCY AND FIRST AID PROCEDURES

In case of skin or eye contact, immediately flush with copious quantities of clean water for at least 15 minutes. Obtain medical attention immediately for eyes. For inhalation, remove from contaminated area. If symptoms persist, obtain medical attention.

## SECTION VI: REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	Excessive heat, fires and hot surfaces

## INCOMPATIBILITY (MATERIALS TO AVOID)

Strong acids

## HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition may produce nitrogen oxides, CO, CO<sub>2</sub>, and traces of HCN.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	None

## SECTION VII: SPILL OR LEAK PROCEDURES

## STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Flush heavily with water

## WASTE DISPOSAL METHOD

Incinerate in furnace.

## SECTION VIII: SPECIAL PROTECTION INFORMATION

## RESPIRATORY PROTECTION (SPECIFY TYPE)

Self-contained breathing apparatus in confined areas.

VENTILATION	LOCAL EXHAUST	SPECIAL
	Preferred	
	MECHANICAL (GENERAL)	OTHER
	Acceptable	

## PROTECTIVE GLOVES

Rubber or plastic. Recommended

## EYE PROTECTION

Chemical goggles

## OTHER PROTECTIVE EQUIPMENT

Eye bath and safety shower.

## SECTION IX: SPECIAL PRECAUTIONS

## PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in closed containers at 70-90°F.

CAUTION! COMBUSTIBLE. LIQUID

MAY CAUSE EYE INJURY.

## OTHER PRECAUTIONS

Keep away from heat, sparks and fire.

S. J. Assony, Ph.D.

PREPARED BY

19 December 1972

DATE

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ADDRESS (NUMBER, STREET, CITY, STATE AND ZIP CODE) 555 Alaska Avenue, Torrance, California 90503		
CHEMICAL NAME AND SYNONYMS DAN	TRADE NAME AND SYNONYMS (QPL 1956 Type 2 & 3) Isonate® CPR 2014 Component B	
CHEMICAL FAMILY Polyester polyol mixture	FORMULA Mixture. DNA	

## SECTION II: HAZARDOUS INGREDIENTS\*

PAINTS, PRESERVATIVES/SOLVENTS	%	TLV (UNITS)	ALLOYS AND METALLIC COATINGS	%	TLV (UNITS)
PIGMENTS Carbon black	4	Unknown	BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES*				%	TLV (UNITS)
Polyadipate ester polyol				77	Unknown
Monoammonium phosphate				16	Unknown

## SECTION III: PHYSICAL DATA

BOILING POINT (°F)	DNA	SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	1.2
VAPOR PRESSURE (mm Hg.)	Nil	PERCENT VOLATILE BY VOLUME (%)	Nil
VAPOR DENSITY (AIR = 1)	DNA	EVAPORATION RATE (_____ = 1)	DNA
SOLUBILITY IN WATER	Nil		

APPEARANCE AND ODOR Black pasty resinous mixture. Very little odor

## SECTION IV: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED) > 300°F. Tag open cup	FLAMMABLE LIMITS	Lel None known	Uel None known
EXTINGUISHING MEDIA Water, foam, CO <sub>2</sub> , dry chemical			
SPECIAL FIRE FIGHTING PROCEDURES None required			

## UNUSUAL FIRE AND EXPLOSION HAZARDS

Thermal decomposition of monoammonium phosphate produces ammonia

\*PLEASE DO NOT USE GENERALIZATIONS, SUCH AS PETROLEUM HYDROCARBONS, ALCOHOL, KETONES.  
USE SPECIFIC CHEMICAL NAMES, SUCH AS METHANOL, BENZENE, PERCHLOROETHYLENE.

## SECTION V: HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

Unknown

EFFECTS OF OVEREXPOSURE

None

EMERGENCY AND FIRST AID PROCEDURES

None required

## SECTION VI: REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	DNA

INCOMPATIBILITY (MATERIALS TO AVOID)

DNA

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition produces ammonia, CO, CO<sub>2</sub>, and traces of nitrogen oxides and HCN.

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

## SECTION VII: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Cover with sawdust or other absorbent material. Sweep up. Wash down area with methylene chloride, observing manufacturer's precautions.

WASTE DISPOSAL METHOD

Dispose of by any standard method consistent with good industrial practice for viscous liquids.

May be incinerated.

## SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE)

None required. When used with CPR 2014 Component A, see Safety Data Sheet.

VENTILATION	LOCAL EXHAUST When used with Component A	SPECIAL --
	MECHANICAL (GENERAL) When used with Component A	OTHER --

PROTECTIVE GLOVES

Not required

EYE PROTECTION

Chemical goggles

OTHER PROTECTIVE EQUIPMENT

None required

## SECTION IX: SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in unopened containers at 70-90°F.

OTHER PRECAUTIONS

None required.

S. J. Assony, Ph.D.

19 December 1972

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